

COMMONWEALTH FORESTRY ASSOCIATION

Award of the Medal for Excellence Perth, Western Australia, 2 October 1998

Address by John Oldham

His Excellency, Major General Michael Jeffery, Governor of Western Australia, Mr. Bob Newman, Chairman of the Asia Pacific Region, Commonwealth Forestry Association and Mr. Ron Adams, President of the Forest Industries Federation of Western Australia, ladies and gentlemen, it is with great pleasure that I accept this award for excellence from the prestigious Commonwealth Forestry Association.

Recognition by ones peers makes the award very valuable to me. As I am a professional engineer it highlights the Commonwealth Forestry Association's recognition that the management of forests encompasses more than the work of professional foresters. Tonight we have with us some of the people from various walks of life who have played a part in shaping the progress of forest management in Western Australia including some of those whose high standards contributed significantly to the excellence recognised tonight. I am indebted to them.

I am particularly indebted to Jean, my wife. Jean has been so loving, so caring, so reliable, so competent, reducing my concern that our home and family might be not be receiving the attention that was due while I was occupied with long work hours and travel. I sincerely thank Jean.

Jean has had first hand experience of the wood pulp mills as they transformed themselves from dirty, smelly, watery caverns to the well lit, well drained, clean working places that most of them are today. Jean has also seen the eucalyptus plantations of Portugal and Brazil re-created in south-western Australia. Jean has also helped me to look after many people, mainly customers and staff.

I suggest this occasion deserves some comments related to forestry. I have put together some notes, based on my experiences in Western Australia forestry over the past 31 years, which I hope you will find interesting enough and pertinent enough to reward your patience.

I will use the word "forests" to identify any large area of trees including plantations, "natural forests" to specifically identify the natural, wild forests and "plantations" to specifically identify areas of trees planted and grown, basically, for a single purpose.

Many aspects of conservation of the environment are being given attention around the world, no more so than in Western Australia, where twenty five percent of the eucalyptus species are found. Magnificent natural forests are utilised in the south-west and their conservation is very important. My first topic will be conservation of the environment.

I will follow this with comment on forest products and finish with comment on plantations.

Conservation of the Environment

The changes through which the many forest ecosystems work, over long timespans, need an understanding and appreciation which forestry professionals has developed over hundreds of years. With this essential knowledge foresters can accept the responsibility of balancing the increasing demand for use of the forests and its products, including the age-old provision of fuel and shelter, and conservation of its environment.

Politicians confirmed the importance of forests for the State when, in 1894, they appointed Mr. J Ednie-Brown, a professional forester, as the first adviser on the management of the forests in Western Australia who would also control the use of the forests for farming and sawmilling. Except for the 1899-1916 period, the government of the State has always had professional foresters managing the forest estate.

Parliament still plays the major role in deciding the broad balance of forest use, just as it should be in a democracy.

The debate which preceded the Woods and Forests Act of 1919, which belatedly emanated from a 1902 Royal Commission, was vigorous. A debate about forest management, with a similar vigour, has occurred in Australia since 1969, when the first concerted wave of the concern for the environment, generated in the United States of America, reached Australia.

Views of the forest products industry in regard to the management of the forest estate are presented by the Forests Industries Federation WA in this state and by the National Association of Forest Industries nationally. I encouraged both these organisations, in which I actively participated, to develop a common approach to issues with parties facing similar issues, including an international network.

About one third of my time in the forests products industry was spent on environmental matters. This was not done begrudgingly. I accepted that we were dealing with a valuable community resource and that we were publicly accountable for our performance.

Most of us consider that trees are an important part of the environment and that they can be made into very useful and beautiful products. Statistics indicate that potential substitutes for these products, such as computers, plastics and metals, only steady the increasing demand for wood

This demand will be met by the original solar powered factory, trees. Something like three percent of the suns energy which falls on an evergreen tree is converted into wood every day. If renewable material is needed, if a source of material, which only draws on abundant sunshine, rain, air and soil to increase, is needed, if a material which can be simply processed using minimum fossil fuel or which provides its own

energy, is needed, if an easily recyclable or biodegradable material is needed, wood is the only answer.

No high technology is needed here.

Forest Products

Albany in the south of this state was the site of the first sawing of wood by European settlers in Western Australia, in 1927, for the construction of military facilities. The founding of the state's capital city, Perth, one year later was marked by the cutting down of a tree. Despite good wood being available in abundance, its cutting and transport must have been difficult because, three years later, one of the landed gentry imported sufficient quantities of douglas fir logs from north America to build a twenty seven room house.

In Western Australia, it is largely a matter of economics whether wood, metal or masonry, which are all readily available, is used for structural purposes. A survey of display homes in Western Australia showed that in luxury homes plenty of decorative wood was used. In the small homes decorative wood featured, no doubt to give a taste of luxury. The industry has since been keen increase the use of decorative wood in the middle range of homes where the survey showed that its use was low.

A major product, wood chips exported for paper making, is mainly made from marri (*E. calophylla*) which grows intermingled with jarrah (*E. marginata*) and karri (*E. diversicolor*) and which is unsuitable for sawmilling. Plantation pine provides wood for many important products.

Since seeing the magnificent regrown stands of karri at Boranup and Big Brook and the little karri seedling surviving in a crack in a large rock, and the very extensive regrowth jarrah in much of the south west of this state, and the full regrowth on all areas from where logs have been taken, I have had no reason to doubt the natural ability of forests to reproduce themselves under good management.

Plantations

The first plantations in the state were pines, *Pinus pinaster*, a natural tree in Portugal, which can be seen in many locations around Perth. It is well adapted to the Mediterranean climate and less fertile soil.

P. radiata, a natural tree on the coast of California, was selected for a Mediterranean climate, but with higher rainfall and more fertile soil, in the south of the state.

Even as far back as the nineteen twenties, foresters anticipated that regrowth of jarrah and karri which was removed for sawing would be suppressed by the large marri trees which was rarely suitable for sawing because often it easily split along channels, naturally in the tree for water processing, and because very dark red gum veins (kino) disfigured the light honey coloured wood.

There was a possibility that the marri could be used to make paper pulp. The assistance of the Commonwealth Scientific and Industrial Research Organisation was sought to test the possibilities and it was found that indeed marri made good paper. Hardwood was rarely used for making pulp in those days and even if it was, it needed a proportion of softwood's long fibres to hold the paper together while it was being wet formed in a continuous sheet.

This was to be provided by the early radiata pine plantations now seen in the south of the state. Papermaking technology changed and these radiata are now producing sawn wood with the smaller pieces being chipped to make paper overseas.

The State has started to use its pinaster growing expertise in the wheat growing area to produce plantations. These are expected to grow to a commercial size while helping to reduce the salinisation of rivers.

The plantation activity in Western Australia in recent years has been dominated by a hardwood, called Tasmanian Blue Gum (*E. globulus*). It has a bluish tinge on the leaves and comes from its main natural habitat of Tasmania and from southern Victoria.

By normal eucalyptus standards, *globulus* grows very fast on fertilised farm paddocks and it has been selected to provide an additional source of wood for papermaking.

My planning in 1979 for the progress of the paper wood chip exports and a possible paper pulp mill included predictions of wood availability. The figures provided by the State's forest service indicated a shortfall from 1992 until thinnings of karri regrowth would become available six years later.

One option I considered for overcoming this problem was the possibility growing enough to fill the gap if we had the same success we were hearing more and more about from Brazil where a monster pulpmill was planned to use wood from trees which were only three years old.

After studying trial plantings of various eucalyptus species at about fourteen sites I noted that in each case *globulus* had grown showing the best or equal best characteristics. I made a small matrix to compare other qualities of the species gleaned from industry knowledge and *globulus* came out the best, just ahead of *saligna*, for the Mediterranean climate, for the soils that they were likely to encounter and for the height above sea level. In 1980 the company board accepted my proposal for a commercial hardwood plantation project.

I once asked an older forestry person in New Zealand how it was that people had planted New Zealand's currently invaluable pine plantations, seventy years ago. His reply was "Faith, you must have faith". Members of a company board would not like to see that sort of argument in a report although many would admit that, despite the many studious arguments put to them, their final decision is often based on "Faith".

We concentrated on globulus but, to satisfy the doubters, trials continued to be run on other species.

Most farmers and their antecedents had, with government financial inducements, spent their lives clearing trees from their land and are not readily receptive to the idea of covering any land with trees.

Furthermore, many farmers were sceptical about the idea of making more money from trees than they could from livestock. The Australian National Government made money available to demonstrate farm forestry. The State forest service received a grant to demonstrate how woodlots could help the farm's environment. My company secured a grant to increase the number of broadacre tree farms which we were creating to demonstrate the economics and practice of treefarming. Both demonstrations were very helpful in developing in the farming community an understanding the value of tree plantations.

At the current rate of planting, the production of hardwood from plantations will have risen from zero in 1980 to the rate in 2006 of four million tonnes per year, valued at about \$100 million as it stands in the farmer's paddock. Some idea of the scale can be gained by noting that this exceeds the 1997 farm paddock value in Western Australia of each of the following products: cannolla, fruit and nuts, live cattle for export, live sheep for export and milk.

It is interesting to note that this four million tonnes, which is being grown for paper making, compares with about 1.7 million tonnes of hardwood now produced for all purposes.

To my mind the many benefits of the advantages of the natural properties of trees will result in a continuing and expanding demand for wood, an increase in wood supplies to meet the demand and an expansion of forested areas, plantations included.

Conclusion

The primary school lesson on the life cycle of trees, with the maturation of the tree, its collapse, its re-growth from its parent seed, its use of carbon dioxide in the air to obtain the carbon it needs to make wood and the release of the separated oxygen to the atmosphere, made a big impression on me and opened my mind to ecosystem possibilities. Every new activity causes me to look for the use of natural processes and qualities to minimise material use and to make life more enjoyable for everyone. Forestry is very satisfying in this regard

We can use wood and still have more. A true "magic pudding" but its not magic, its management.

John Oldham
14 September 1998